Expert Advice For the Automobile Owner

Queries and Replies Covering Matters of Importance to the Man Who Runs a Car

What makes it possible for one wheel to reverse while the other goes ahead, running on a wet pavement with the brakes applied?

The differential action will allow one wheel to revolve clockwise, while the other turns anti-clockwise, but with the brakes applied and holding well neither wheel should turn. In the case you mention the brakes evidently were slipping and thus permitted the wheels to turn.

In setting a motor for high speed what changes should be made in the valve timing?

The most important and effective change is to keep the intake valve open for a longer period.

Kindly explain just how a backfire is caused and why this should happen any more with a weak mixture than when the mixture is rich. Also where does the backfire start?

A backfire is possible with either a weak or rich mixture, although more common with the former, because a weak mixture burns more slowly. The backfire starts in the cylinder and is due to the presence of flame in the combustion chamber when the intake valve opens to take in a fresh charge. If the combustion of the charge is very slow there will be a flame in the cylinder, not only all through the power or expansion stroke, but also through the succeeding exhaust stroke. so that what gas remains in the cylinder when the exhaust valve closes and the intake valve opens is still heandescent and sets the fresh charge on fire the moment it comes in contact with it, thus producing a backtire. Ordinarily a backtire can only be produced by a weak mixture at high speed, say 1,000 revolutions per minute, although with a very weak mixture or a very late spark a backfire may be produced at a much lower speed, say 800. It is possible to make the motor backfire by using too rich a mixture also, but the overrich mixture burns faster than the one that is too lean, and therefore the former is generally burned out before the intake

Will larger valves increase the power and speed of a motor?

Large valves are essential to power. Large intake valves especially add much to the power of an engine.

What do cylinders offset from the erank shaft mean?

An offset cylinder is one whose axis is offset from the vertical plane knock, continued use of a low grade through the crank shaft. That is a fuel may cause much curban to deposit line drawn vertically through the on the piston, and this will make a precrank shaft center. In offset cylinder ignition knock. The knock is caused construction when the piston is on top by the piston striking the cylinder wall. dead center the connecting rod is not directly in line with the crank shaft, but, rather, makes an augle with it.

ish the side pressure exerted between the piston and cylinder when the pis- possibility of earbon being deposited ton 4s on the firing stroke, ascomplish-

RUB-MY-TISM

Neuralgia, Headaches, Cramps, ing of too small an amount of oil hard Colic, Sprains, Bruises, Cuts and Burns, Old Sores, Stings of Invegre | through the valves. But lack of intri-Etc. Antiseptic Anodyne, used internally and externally. Price 25c.

ed here by reducing the angle of the connecting rod when the pressure upon the piston is great and increasing the angularity when the pressure is low,

What is meant by casehardening?

Casehardening refers to a process of producing a hard carting of metal over a piece of steel. The process consists in heating the metal and then lightly sprinkling potassium cyanide over it while it is hot. This causes an action between the metal and the cyanide, with the production of a coating which is very hard. This case or coat ing has good wearing qualities and protects the inner metal, which is softer and acts as a cushion for the case Aside from the cyanide mentioned above, charcoal is used or charcoal mixed with barlum carbonate.

Can a high tension magneto that runs at crank shaft speed and rotates clock-wise be timed or changed to rotate in the opposite direction, or anti-clock-

The magneto referred to can be changed to run anti-clockwise by simply removing the gears from the distributer and resetting them so as to earry the current over the points of contact throughout the full range of spark advance at full retard and at full advance. Simply take the gears out of the distributer, revolving the armature by hand in an anti-clockwise diraction, and when the position in which the armature turns requires a good deal of force to continue the turning. due to the pull of the magneto, insert the gear in the distributer so that it If the model magneto referred to has n roller type distributer the same operation holds good, except that the roller with the internal gear should be set so that the contacts are just meeting the small metal roller.

What advantages are gained by fitting three piston rings to the groove instead of one?

The advantages claimed for special piston rings are that they hold compression better, prevent oil from entering the compression chamber more effectively and in some cases reduce the wear on the cylinder walls.

a motor to knock?

Poor gasoline would quite probably cause a knock in the motor. The low quality fuel may cause slow burning in one or more cylinders. Slow burning will sometimes cause a preignition

Would an excess of oil or too little oil Cylinders are offset so as to dimin- er than under ordinary conditions?

and causes pitting, as it is called, and Will cure your Rheumatism of compression will follow. The feedly would cause a loss of compression enting oil will cause excess wear on the cylinder wall and piston. This

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wear might enow or has esempage. dry motor will become hot more quickly than one properly lubricated, and if operated continually above normal temperature the ton lency toward valve warpage will be greater.

Which of the following methods will stop a motorcar in the shorter distance, applying brakes to lock the wheels or applying greatest possible brake strain without locking wheels? And will a heavy car stop in as short a distance as a light one, the speed and brake power being equal?

It is generally supposed that a motorcar will stop in a shorter distance if the wheels are not fully locked, but almost so and revolving. When the brakes are applied so the wheels lock the only friction tending to stop the car is that of the tires on the ground, but when the brakes are applied so as nearly to lock the wheels there is rolling friction of the wheels, gear set and rear axle friction and brake friction; hence with the greater friction the car will stop in a shorter distance. If you will watch street car motormen whose cars are equipped with air brakes or locomotive engineers at work you will find that when the conveyance is to be stopped the brake control is alternately applied and released, thus setting and releasing the brakes, which prevents the wheels from sliding. This not only tends to keep the vehicle from moving off the track, but stops it in a shorter distance than if the wheels had to slide on the

Of two cars exactly the same in ev ery respect, except as to the load carried, the one with the lighter load will stop in the shorter distance. This may be attributed to the fact that the inertia of the heavier vehicle is greater than that of the lighter. If you were pushing a baby buggy at ten miles per hour you could very easily stop it within a few yards, but if you were pushing a 300 pound cart you would find it would require a greater distance in which to stop.

What pressure is counted good com pression in a cylinder?

Good average practice is about seventy pounds to the square inch.

I wish to paint black the brass fixthe gear in the distributor so that it.
Is just coming into the metal contact.
Can you inform me how I am to do this

How can a motor designed for a cerconsequent improper seating and loss tain voltage do any pulling at all when connected up to a current either twice or only half as much as the designers figured on? It is understood that the generator supplying current is one of low voltage, probably about thirty-two An electric motor designed to operatnormally at thirty-two volts, for exact

ple, will operate at voltages under thirty-two, but the speed will be reduced considerably. It also may be operated at slightly over thirty-two volts provided the designer took this into consideration in the yindings. Many elective vehicles are operated by simply changing the voltage across the motor terminals, this being accomplished odists erected in 1830 a small, plain said County.

Should too much oil be fed there is a proved satisfactory in practice. It is possibility of carbon being deposited in quantifies, due to the burning of the excess oil. This carbon gets into the valve seats and in lead of a pentant of the reservers' hands. The same bership and in the number of their the panic of 1893, which three most churches. Only one Confederate of the panic of 1893, which three most churches. Only one Confederate of the panic of 1893, which three most churches. Only one Confederate of the panic of 1893, which three most churches. Only one Confederate of the panic of 1893, which three most college and in lead of pentant of the panic of 1893, which three most college and most confederate of the panic of 1893, which three main confederate of the panic of 1893, which three most college and most confederate of the panic of 1893, which three main confederate of the panic of 1893, which three main confederate of the panic of 1893, which three main confederate of the panic of 1893, which three main confederate of the panic of 1893, which three main confederate of the panic of 1893, which three main confederate of the panic of 1893, which the main confederate of the panic of 1893, which three most part of the panic of 1893, which three most part of the panic of 1893, which three most part of the panic of 1893, which three most part of the panic of 1893, which three main provides the panic of 1893, which three main provides the panic of 1893, which the panic of 1893, which three most part of the panic of 1893, which the panic of 1 of these ronds into receivers' hands, this being followed by the consolidation upon a really collosal scale of the Southern Railway. The City of Flowers now became known as a splendid distributing point, a desirable location for manufacture of every sort, being near to the raw material and close to growing markets. The factories came.

Wherever Presbyterianism thrives good schools and few mortgages are found. It is only in a Presbyterian community that a bond issue for the crection of a college—and a negro college at that—could carry with only one vote against it, and this happened in the City of Flowers in the year of the street have been borne to their ment, appreciated honor and cultivalued for the crection of the city of Flowers in the year editions. In the Gate City I am a college of the constant of the city of Flowers in the year editions.

one vote against it, and this happen-bed in the City of Flowers in the year ed flowers. In the Gate City I am a 1891. During the period of 1888- stranger in a strange land. And 1893, three new colleges were estab-lished and the total population of ed, amended, improved and revised, a lished and the total population of ed, amended, improved and revised, a white and black in 1890 was less than Calvinism which escapes dryness by

white and black in 1890 was less than 3,500.

One of these schools, the Normal and Industrial College for Young Women, brought to us as members of its faculty a group of young men destined to become the educational leaders of the South. Dr. Chas. D. Mc-Iver, the first president of the college: Dr. E. A. Alderman, now president of the University of Virginia; Dr. P. P. Claxton, National Commissioner of Education; J. Y. Joyner, the leader of the educational movement in North Carolina and now for a number of years the Superintendent of Public Instruction in that state. For an interesting but not altogether accurate account of this educational campaign had only a name to live. Everywhere cities were laid out impressed to the college. had only a name to live. Everywhere cities were laid out, imposing hotels, looking like exaggerated Queen Anne cottages, were erected, glowing pros-pectuses were prepared and widely listributed, and the promoter fattened

distributed, and the promoter fattened upon the hopes of men.

The conservatism of Calvinism gave place to a distinctly Arminian commercial philosophy, holding better the fluctuations of fortune, the possession of wealth followed by a sudden fall which led to the founding of this school, read Walter Hines Page's "Southerner," a book which, however, does not reflect upon the distinguished ambassador to Great Britain very much literary credit. Other educators were reared there: Henry that the possession of the said cartificate shall be researed that the original property of the property of the cartificate of such certificate in the possession of wealth followed by a sudden fall which led to the founding of this school, read Walter Hines Page's "Southerner," a book which, however, does not reflect upon the distinguished ambassador to Great Britain very much literary credit. Other educators were reared there: Henry that the property of the property ucators were reared there: Henry Louis Smith, President of Washing-ton and Lee University; Charles C. Weaver, President of Henry and Em-ery College; C. Alphonso Smith, Roosevelt Exchange Professor of

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Notice of Application for Tax Deed Under Section 8 of Chapter 4888, Laws of Florida.

NOTICE is hereby given N. L. McRas purchaser of Tax Certificate No. 30, dated the 7th day of July A. D. 1012

Witness my official signature and this. al this the 17th day of September A. D.

NOTICE FOR BIDS.

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Corrified list of all qualified voters sadding within the proposed Special har S heed District that pay a tax on all or porsonal property and are qual-fied to rate in the special election to e held in said territory on October 211. A D 1915 said territory being ribad in notice of election PHECINCT NO 19,

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Plouda this September

Supervisor of Registration, Purnon County, Florida,

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Defendants.

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R. W. Near and his wife, Grace P.

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dished once a week for four conweeks in the Palatka News
vertiaer a newspaper published
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ons my hand and official Seal
to 25th day of August, 1915.

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